

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/851,113

AMENDMENTS TO THE CLAIMS

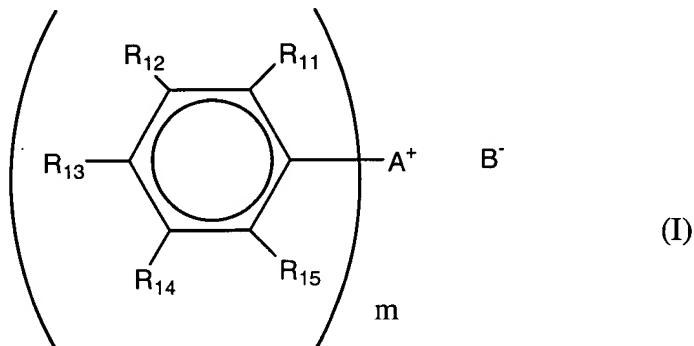
This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Please enter the following amended claims:

1. (Twice Amended) A positive radiation-sensitive composition comprising:
 - (a) a resin whose solubility in an alkali developer increases by the action of an acid;
 - (b) a compound that generates a carboxylic acid having a molecular weight of 100 or less upon irradiation with an actinic ray or a radiant ray;
 - (c) a surfactant; and
 - (d) a solvent,

wherein compound (b) is present in an amount of from 1 to 20 wt% based upon the solid contents, and the compound (b) is a compound represented by the following formula (I):



wherein R₁₁, R₁₂, R₁₃, R₁₄ and R₁₅ each independently represents a hydrogen atom, a straight chain, branched or cyclic alkyl group, a straight chain, branched or cyclic alkoxy group, a

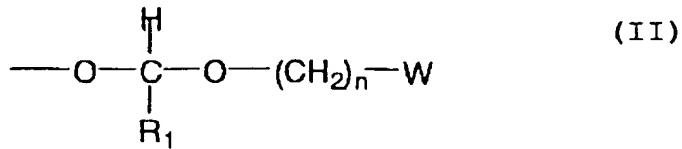
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hydroxyl group, a halogen atom, or -S-R₀; R₀ represents a straight chain, branched or cyclic alkyl group, or an aryl group, A⁺ represents S⁺ or I⁺; B⁻ represents CH₃COO⁻, C₂H₅COO⁻ or C₃H₇COO⁻; and m represents 2 or 3.

2. (original): The positive radiation-sensitive composition as claimed in claim 1, which further comprises (b') a compound that generates a sulfonic acid upon irradiation with an actinic ray or a radiant ray.

3. (canceled).

4. (original): The positive radiation-sensitive composition as claimed in claim 1, wherein the resin (a) has an acid-decomposable group represented by the following formula (II):



wherein R₁ represents an alkyl group having from 1 to 4 carbon atoms; W represents an amino group, an ammonium group, a mercapto group, a substituted or unsubstituted aryl group, a substituted or unsubstituted cycloalkyl group, or an organic group containing (i) at least one atom selected from the group consisting of an oxygen atom, a nitrogen atom, a sulfur atom, a

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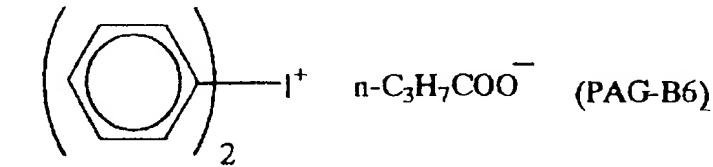
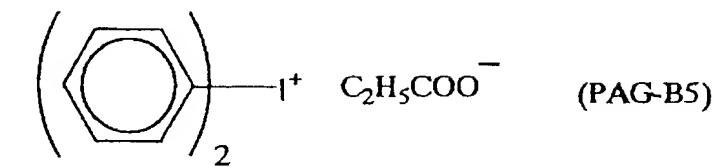
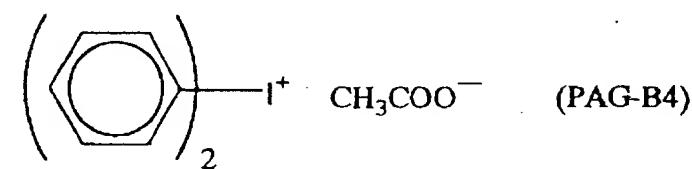
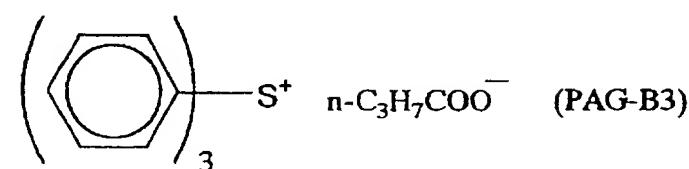
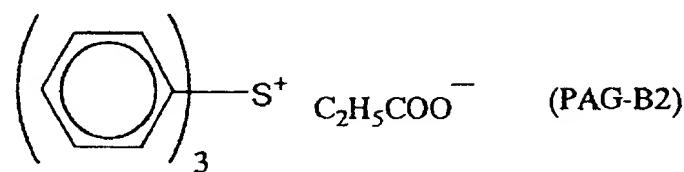
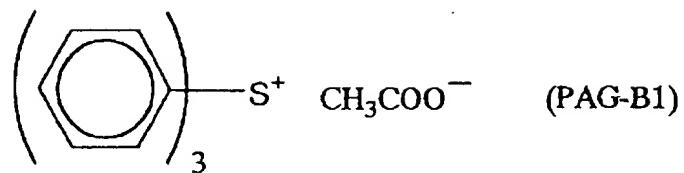
phosphorus atom and a silicon atom, and (ii) at least one carbon atom; and n represents a natural number of from 1 to 4.

5. (original): The positive radiation-sensitive composition as claimed in claim 1, wherein the resin (a) is a resin in which phenolic hydroxyl groups in an alkali-soluble resin are at least partly protected with the acid-decomposable group represented by the formula (II).

6. (original): The positive radiation-sensitive composition as claimed in claim 1, which further comprises an organic basic compound.

7. (original): The positive radiation-sensitive composition as claimed in claim 1, wherein the compound (b) is at least one compound selected from the group consisting of the following (PAG-B1) to (PAG-B6):

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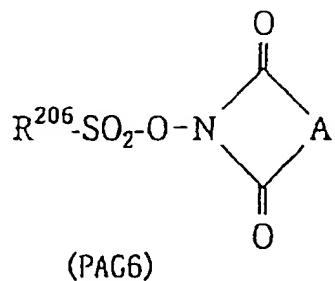
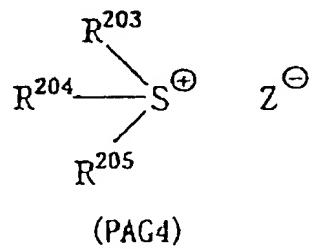
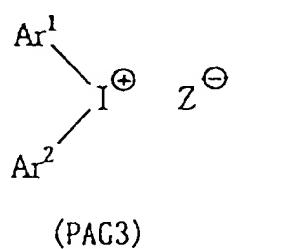


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8. (currently amended): The positive radiation-sensitive composition as claimed in claim 7, wherein the compound (b) is at least one compound selected from the group consisting of the above (PAG-B1) and (PAG-B4).

9. (canceled).

10. (original): The positive radiation-sensitive composition as claimed in claim 2, wherein the compound (b') is a compound represented by the following formula (PAG3), (PAG4) or (PAG6):

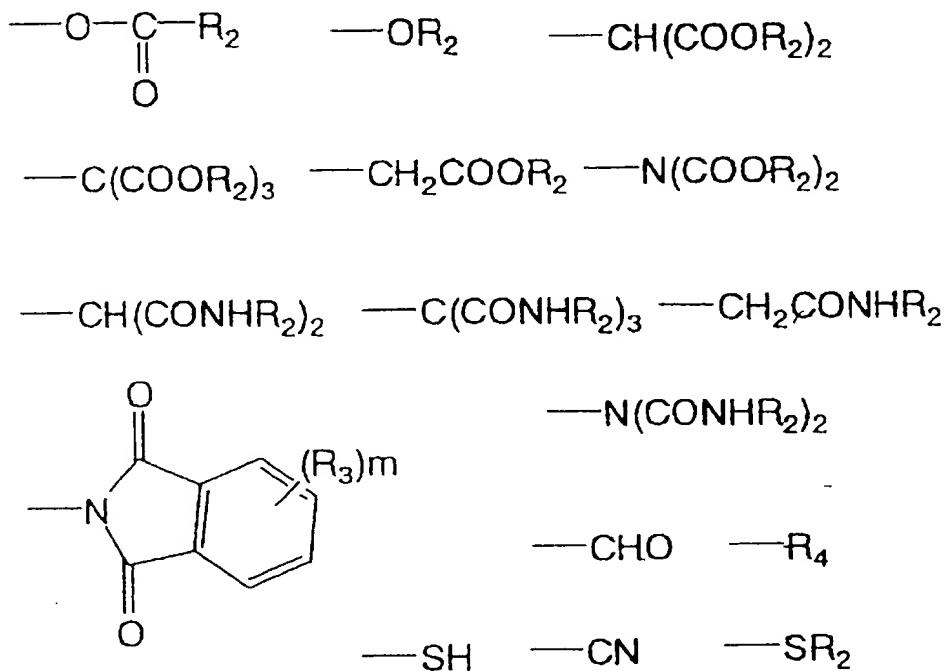


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wherein Ar¹ and Ar² each independently represents a substituted or unsubstituted aryl group; R²⁰³, R²⁰⁴ and R²⁰⁵ each independently represents a substituted or unsubstituted alkyl or aryl group; R²⁰⁶ represents a substituted or unsubstituted alkyl or aryl group; A represents a substituted or unsubstituted alkylene, alkenylene or arylene group.

11. (original): The positive radiation-sensitive composition as claimed in claim 2, which contains the compound (b') in an amount of from 1 to 20 wt% based on the solid contents.

12. (original): The positive radiation-sensitive composition as claimed in claim 4, wherein W of said formula (II) is a group represented by the following formula:



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wherein R₂ represents a hydrogen atom, a straight chain, branched or cyclic alkyl group having from 1 to 6 carbon atoms, a straight chain, branched or cyclic alkenyl group having from 2 to 6 carbon atoms, a substituted or unsubstituted aryl group, or a substituted or unsubstituted aralkyl group; R₃ represents a hydrogen atom, a straight chain, branched or cyclic alkyl group having from 1 to 6 carbon atoms, a straight chain, branched or cyclic alkoxy group having from 1 to 6 carbon atoms, a halogen atom, a nitro group, an amino group, a hydroxyl group, or a cyano group; R₄ represents a substituted or unsubstituted aryl group, or a substituted or unsubstituted cycloalkyl group having from 3 to 15 carbon atoms; m represents a natural number of from 1 to 4.

13. (original):The positive radiation-sensitive composition as claimed in claim 4, wherein the resin (a) is a resin in which 5 to 45 mol% of an entire phenolic hydroxyl groups in an alkali-soluble resin are protected with an acid-decomposable group represented by the formula (II).

14. (original):The positive radiation-sensitive composition as claimed in claim 1, wherein the resin (a) has a weight average molecular weight of from 3,000 to 80,000.

15. (original):The positive radiation-sensitive composition as claimed in claim 1, wherein the surfactant (c) contains at least one of a fluorine atom and a silicon atom.